INVITED COMMENTARY

Surgeon Still a Step Behind Medicine: Indicators of Healthcare for Peripheral Artery Disease

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Patients with peripheral arterial disease (PAD) currently have a range of therapies that might improve outcomes, including supervised exercise programs, medications, endovascular procedures, and surgery. An appropriate clinical approach to PAD could decrease morbidity and mortality, reduce the risk of amputation, and increase patients' functional status and quality of life. Nevertheless, in clinical practice significant judgment by the physician to adapt the variety of treatments available to the care of each individual patient with PAD is often required with uncertain and often unsatisfactory effects on outcomes. Even though PAD has been extensively researched and is the subject of many systematic reviews, there is a lack of high qualitative studies, and of what constitutes optimal management for patients with the disease. This weakness emerged in the recent review by Bellmunt et al.,[1] which aimed to evaluate the appropriateness of healthcare provided in PAD by generating indicators of care based on interventions supported by strong evidence. To use the best knowledge as a source of indicators for PAD, literature search was restricted to systematic reviews, and only recommendations based on systematic reviews with high methodological quality and high strength evidence were finally selected. The results outlined in Bellmunt's review identified six interventions of what constitutes optimal management for PAD patients and thereby from which indicators could be derived: four on pharmacology (antiplatelets, statins, cilostazol, naftidrofuryl) and two on lifestyle (exercise and smoking) for intermittent claudication. Nevertheless, even if based on the "strongest" evidence, each of these indicators was derived from one or, exceptionally, two systematic reviews, most presenting too limited methodology to be applied in generating indicators.

Systematic reviews are assumed to represent the highest level of evidence and provide the highest degree of reliability for management of patient care. If sound and rigorous methodology is not applied, their strength fails. High-level scientific approach barely has been applied in the several systematic reviews on PAD, especially in those evaluating surgical techniques in patients with critical limb ischemia (CLI). In the study by Bellmunt,[1] from a total of almost 2000 systematic reviews on PAD initially identified, only 29 conclusive and high-quality reviews were retrieved and nine clinical recommendations with moderate/high strength were finally selected to generate six indicators of quality. Of relevance, no quality indicator could be derived on surgical technique or strategies for revascularization in PAD because high-quality and strong evidence was lacking, thus suggesting that the surgeon is still one step behind medicine in scientific research and patient care. Over the past two centuries, surgery has become radically more refined, effective, and invasiveness substantially reduced[2] — changes that have been progressively supported by studies performed by surgeons. Nevertheless, despite the increased involvement in clinical research and the large number of publications and systematic reviews available today, especially after the implementation of newer less-invasive techniques, most surgeons still fail to achieve equivalent high-quality scientific approach when compared with their medical counterparts where superior, more refined and sound methodology is applied. Quality of healthcare is expected to be uncertain or inferior when provided by surgeons.

As a result, it is evident that there is a current inability to judge the performance of patient care with more advanced peripheral disease, that is patients with CLI, who cannot benefit from medical therapy alone and require a more aggressive and invasive treatment to achieve improved outcomes. Most indicators generated by Bellmunt[1] targeted patients with intermittent claudication, while no consistent clinical recommendations were found for CLI. Management of CLI patients remains challenging and prognosis concerning limb salvage, mortality, and quality of life is poor. As to whether this is because of the particular aggressiveness of the disease or more likely the lack of high-level methodology research in this field, remains an object of debate. It is evident that there is an extraordinarily large variability in reporting (definitions, location, severity of disease; type of patients, etc.) to reliably assess CLI. Current guidelines still do not fully address how to best approach this variability especially in patients with infrapopliteal lesions, diabetes, and CLI.

In recent years, there has been increased focus on developing the quality of healthcare for cardiovascular diseases. According to data there is currently a great need to improve healthcare performance in patients with PAD. Despite the large number of published studies, the development of evidence-based approach in PAD is limited by the lack of methodological quality of researches and the

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inconclusiveness of the evidence on surgical techniques. Implementing rigorous methodology in primary researches and systematic reviews for PAD may help most surgeons to achieve more conclusive strategies, increased quality of healthcare and improved patient outcomes especially for those with CLI.

REFERENCES

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